

IN THE CLAIMS

For the Examiner's convenience, this Amendment includes the text of all claims under examination.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1.-26. (Canceled).

Claim 27. (Previously presented): An artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns.

Claim 28. (Previously presented): The artificial antibody according to claim 27, wherein said particle size is between about 10 nm and 100 nm.

Claim 29. (Previously presented): The artificial antibody according to claim 27, wherein said specific binding sites are specific for a drug molecule.

Claim 30. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule is theophylline.

Claim 31. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule is a benzodiazepine drug.

Claim 32. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule is diazepam.

Claim 33. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule has a narrow therapeutic index.

Claim 34.-35. (Canceled).

Claim 36. (Previously presented): The artificial antibody according to claim 27, wherein said particle size is between about 10 nm and 1000 nm.

Claims 37.-53. (Canceled).

Claim 54. (Previously presented): The method according to claim 88, wherein said label comprises at least a radioligand, an enzyme, biotin, a steroid, or a fluorochrome.

Claim 55. (Previously presented): The method according to claim 88, wherein a label of said labeled organic molecule is gold.

Claim 56. (Previously presented): The method according to claim 88, wherein a label of said labeled organic molecule comprises at least an electrochemiluminescent compound.

Claims 57.-71. (Canceled).

Claim 72. (Previously presented): The artificial antibody according to claim 27, wherein said molecular imprint polymerization at least reacts a methacrylic acid molecule with an ethylene glycol dimethacrylate molecule.

Claim 73. (Previously presented): The artificial antibody according to claim 27, wherein said molecular imprint polymerization reacts at least one molecule of itaconic acid, vinylpyridine, vinylimidazole, or alkylated hydrophobic monomer.

Claim 74. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for at least a nucleic acid or a nucleotide.

Claim 75. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a metabolite.

Claim 76. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a toxin.

Claim 77. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a prostaglandin molecule.

Claim 78. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a hormone.

Claim 79. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for an opiate molecule.

Claims 80.-87. (Canceled).

Claim 88. (Previously presented): A method for determining the amount of an organic molecule in a fluid, comprising the steps of:

obtaining a fluid sample having an organic molecule,

adding a known amount of a labeled organic molecule to said sample,

contacting said sample with an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for said organic molecule, wherein said artificial antibody has a particle size of less than about five microns,

binding said organic molecule with said artificial antibody so that said organic molecule and said labeled organic molecule in said sample competitively bind with said artificial antibody; and determining the amount of said labeled organic molecule unbound in said sample or bound to said artificial antibody so as to determine the amount of said organic molecule in said fluid.

Claim 89. (Previously presented): The method according to claim 88, in which said particle size is between about 10 nm and 100 nm.

Claim 90. (Previously presented): The method according to claim 88, in which said particle size is between about 10 nm and 1000 nm.

Claim 91. (Canceled).

Claim 92. (Previously presented): The method according to claim 89, in which a label of said labeled organic molecule comprises at least an electrochemiluminescent compound.

Claim 93. (Previously presented): The method according to claim 90, in which a label of said labeled organic molecule comprises at least an electrochemiluminescent compound.

Claim 94.-95. (Canceled).

Claim 96. (Previously presented): A method of therapy, comprising:
providing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization for a target and having a binding site with specificity for said target,
wherein said artificial antibody has a particle size less than about five microns, and

treating a patient having a bodily fluid having said target by providing said artificial antibody to said bodily fluid and specifically binding the target and said artificial antibody forming a bound target,

withdrawing said bound target from said bodily fluid of said mammal body having said target.

Claim 97. (Previously presented): A method of therapy according to claim 96, further comprising the step of:

administering said artificial antibody to the body of a patient.

Claim 98. (Previously presented): A method of therapy according to claim 96, further comprising the steps of:

removing said bodily fluid having said target from a patient,
conducting said specifically binding in an extra-corporal device containing said artificial antibody.

Claim 99. (Previously presented): A method of therapy according to claim 98, further comprising the step of:

returning said bodily fluid to said patient after said withdrawing said bound target.

Claim 100. (Previously presented): The method according to any one of claims 96-99 either claim 85 or 86, in which said target imprinted molecule is a toxin.

Claim 101. (Previously presented): The method according to any one of claims 96-99 either claim 85 or 86, in which said target is a cancer cell comprises said imprinted molecule.

Claims 102.-104. (Canceled)

Claim 105. (Previously presented): The method according to claim 88, in which said organic molecule is drug molecule.

Claim 106. (Previously presented): The method according to claim 88, in which said organic molecule is a metabolite.

Claim 107. (Previously presented): The method according to claim 88, in which said organic molecule is a nucleotide.

Claim 108. (Previously presented): The method according to claim 88, in which said organic molecule is a nucleic acid.

Claim 109. (Previously presented): The method according to claim 88, in which said organic molecule is a carbohydrate.

Claim 110. (Previously presented): The method according to any one of claims 88, 89 and 90, in which said organic molecule is a protein.

Claim 111. (Previously presented): The method according to any one of claims 88, 89 and 90, in which said organic molecule is a hormone.

Claim 112. (Previously presented): The method according any one of claims 88, 89 and 90, in which said organic molecule is a toxin.

Claim 113. (Previously presented): The method according to claim 88, in which said organic molecule is a prostaglandin.

Claim 114. (Previously presented): The method according to claim 88, in which said organic molecule is a leukotriene.

Claim 115. (New): The method of therapy according to claim 96, further comprising the steps of:

removing said bodily fluid having said artificial antibody from said patient, and returning said bodily fluid to said patient after said withdrawing step.